Juan Jose J Palacios

List of Publications by Year
in descending order

151 papers	8,369 citations	61984 43 h-index	46799 89 g-index
153 all docs	153 docs citations	153 times ranked	9559 citing authors

#	Article	IF	Citations
1	Multi-scale modeling of 2D GaSe FETs with strained channels. Nanotechnology, 2022, 33, 105201.	2.6	3
2	Constrained DFT for Molecular Junctions. Nanomaterials, 2022, 12, 1234.	4.1	1
3	Deep learning for disordered topological insulators through their entanglement spectrum. Physical Review B, 2022, 105, .	3.2	1
4	Exfoliation of Alphaâ€Germanium: A Covalent Diamondâ€Like Structure. Advanced Materials, 2021, 33, e2006826.	21.0	27
5	Franckeite as an Exfoliable Naturally Occurring Topological Insulator. Nano Letters, 2021, 21, 7781-7788.	9.1	6
6	Emergence of Topological Edge States in Oxidized Î±-In₂Se₃ Nanosheets: Implications for Field-Effect Transistors. ACS Applied Nano Materials, 2021, 4, 8154-8161.	5.0	7
7	Few-layer antimonene electrical properties. Applied Materials Today, 2021, 24, 101132.	4.3	6
8	Charge-spin interconversion in graphene-based systems from density functional theory. Physical Review B, 2021, 104, .	3.2	3
9	Surface-dominated conductivity of few-layered antimonene. 2D Materials, 2020, 7, 021001.	4.4	1
10	Room-temperature quantum spin Hall phase in laser-patterned few-layer 1Tâ€²- MoS2. Communications Materials, 2020, 1, .	6.9	6
11	Refined electron-spin transport model for single-element ferromagnetic systems: Application to nickel nanocontacts. Physical Review B, 2020, 102, .	3.2	4
12	Revealing the Geometry and Conductance of Double-Stranded Atomic Chains of Gold. Journal of Physical Chemistry C, 2020, 124, 26596-26602.	3.1	3
13	Directional bonding explains the high conductance of atomic contacts in bcc metals. Physical Review B, 2020, 101, .	3.2	4
14	Remarkably enhanced Curie temperature in monolayer CrI3 by hydrogen and oxygen adsorption: A first-principles calculations. Computational Materials Science, 2020, 183, 109820.	3.0	41
15	Consistency between ARPES and STM measurements on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SmB</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:math> Physical Review B, 2020, 101, .	3.2	16
16	Functionalization of a Few-Layer Antimonene with Oligonucleotides for DNA Sensing. ACS Applied Nano Materials, 2020, 3, 3625-3633.	5.0	26
17	Quantum transport in oxidized Ni nanocontacts under mechanical strain. Physical Review B, 2020, 101, .	3.2	3
18	Quenching of Exciton Recombination in Strained Two-Dimensional Monochalcogenides. Physical Review Letters, 2019, 123, 077402.	7.8	3

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19	Dynamically tuned non-classical light emission from atomic defects in hexagonal boron nitride. Communications Physics, 2019, 2, .	5.3	35
20	Long-range vortex transfer in superconducting nanowires. Scientific Reports, 2019, 9, 12386.	3.3	18
21	Liquid phase exfoliation of antimonene: systematic optimization, characterization and electrocatalytic properties. Journal of Materials Chemistry A, 2019, 7, 22475-22486.	10.3	54
22	Laser-Beam-Patterned Topological Insulating States on Thin Semiconducting <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Physical Review Letters, 2019, 123, 146803.	7.8	23
23	Strong modulation of optical properties in rippled 2D GaSe via strain engineering. Nanotechnology, 2019, 30, 24LT01.	2.6	21
24	Hydrogen physisorption channel on graphene: a highway for atomic H diffusion. 2D Materials, 2019, 6, 021004.	4.4	13
25	High Electrical Conductivity of Single Metalâ€“Organic Chains. Advanced Materials, 2018, 30, e1705645.	21.0	13
26	Recent Progress on Antimonene: A New Bidimensional Material. Advanced Materials, 2018, 30, 1703771.	21.0	245
27	An implementation of spinâ€“orbit coupling for band structure calculations with Gaussian basis sets: Two-dimensional topological crystals of Sb and Bi. Beilstein Journal of Nanotechnology, 2018, 9, 1015-1023.	2.8	9
28	Observation of a well-defined hybridization gap and in-gap states on the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SmB</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:math> (001) surface. Physical Review B, 2018, 97, .	3.2	20
29	Strain engineering of Schottky barriers in single- and few-layer MoS ₂ vertical devices. 2D Materials, 2017, 4, 021006.	4.4	54
30	Franckeite as a naturally occurring van der Waals heterostructure. Nature Communications, 2017, 8, 14409.	12.8	103
31	Graphene flakes obtained by local electro-exfoliation of graphite with a STM tip. Physical Chemistry Chemical Physics, 2017, 19, 8061-8068.	2.8	11
32	Electronic transport in gadolinium atomic-size contacts. Physical Review B, 2017, 95, .	3.2	4
33	High Current Density Electrical Breakdown of TiS₃ Nanoribbonâ€Based Fieldâ€Effect Transistors. Advanced Functional Materials, 2017, 27, 1605647.	14.9	52
34	A theoretical study of the electrical contact between metallic and semiconducting phases in monolayer MoS ₂. 2D Materials, 2017, 4, 015014.	4.4	21
35	Atomic-scale control of graphene magnetism by using hydrogen atoms. Science, 2016, 352, 437-441.	12.6	545
36	Dynamic bonding of metallic nanocontacts: Insights from experiments and atomistic simulations. Physical Review B, 2016, 93, .	3.2	17

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37	Plasticity of single-atom Pb junctions. Physical Review B, 2016, 93, .	3.2	15
38	Resonant transport and electrostatic effects in single-molecule electrical junctions. Physical Review B, 2015, 91, .	3.2	28
39	Effective-mass theory for the anisotropic exciton in two-dimensional crystals: Application to phosphorene. Physical Review B, 2015, 91, .	3.2	47
40	Theoretical study of the dynamics of atomic hydrogen adsorbed on graphene multilayers. Physical Review B, 2015, 91, .	3.2	23
41	Modeling contact formation between atomic-sized gold tips via molecular dynamics. Journal of Physics: Conference Series, 2015, 574, 012045.	0.4	10
42	Substrate-Induced Stabilization and Reconstruction of Zigzag Edges in Graphene Nanoislands on Ni(111). Journal of Physical Chemistry C, 2015, 119, 4072-4078.	3.1	15
43	Electrically Switchable Magnetic Molecules: Inducing a Magnetic Coupling by Means of an External Electric Field in a Mixedâ€Valence Polyoxovanadate Cluster. Chemistry - A European Journal, 2015, 21, 763-769.	3.3	39
44	Theory of projections with nonorthogonal basis sets: Partitioning techniques and effective Hamiltonians. Physical Review B, 2014, 90, .	3.2	28
45	Hydrogenation-induced ferromagnetism on graphite surfaces. Physical Review B, 2014, 90, .	3.2	36
46	Anomalous exchange interaction between intrinsic spins in conducting graphene systems. Physical Review B, 2014, 89, .	3.2	6
47	Isolation and characterization of few-layer black phosphorus. 2D Materials, 2014, 1, 025001.	4.4	1,411
48	Electrons go ballistic. Nature Physics, 2014, 10, 182-183.	16.7	9
49	A Molecular Platinum Cluster Junction: A Single-Molecule Switch. Journal of the American Chemical Society, 2013, 135, 2052-2055.	13.7	29
50	Understanding the structure of the first atomic contact in gold. Nanoscale Research Letters, 2013, 8, 257.	5.7	15
51	Magnetic field-induced dissipation-free state in superconducting nanostructures. Nature Communications, 2013, 4, 1437.	12.8	90
52	Topologically Protected Quantum Transport in Locally Exfoliated Bismuth at Room Temperature. Physical Review Letters, 2013, 110, 176802.	7.8	101
53	Kondo effect and spin quenching in high-spin molecules on metal substrates. Physical Review B, 2013, 88, .	3.2	44
54	Reversible Change of the Spin State in a Manganese Phthalocyanine by Coordination of CO Molecule. Physical Review Letters, 2012, 109, 147202.	7.8	106

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55	Mechanical Annealing of Metallic Electrodes at the Atomic Scale. Physical Review Letters, 2012, 108, 205502.	7.8	37
56	Spin-filtered edge states in graphene. Solid State Communications, 2012, 152, 1469-1476.	1.9	13
57	Critical analysis of vacancy-induced magnetism in monolayer and bilayer graphene. Physical Review B, 2012, 85, .	3.2	105
58	Magnetoresistance and Magnetic Ordering Fingerprints in Hydrogenated Graphene. Physical Review Letters, 2011, 107, 016602.	7.8	132
59	Magnetism-Dependent Transport Phenomena in Hydrogenated Graphene: From Spin-Splitting to Localization Effects. ACS Nano, 2011, 5, 3987-3992.	14.6	47
60	Spin-orbit interaction in curved graphene ribbons. Physical Review B, 2011, 83, .	3.2	29
61	Critical comparison of electrode models in density functional theory based quantum transport calculations. Journal of Chemical Physics, 2011, 134, 044118.	3.0	44
62	Spin-Transfer Torque on a Single Magnetic Adatom. Physical Review Letters, 2010, 104, 026601.	7.8	90
63	Hydrogenated graphene nanoribbons for spintronics. Physical Review B, 2010, 81, .	3.2	119
64	Anomalous Transport and Possible Phase Transition in Palladium Nanojunctions. ACS Nano, 2010, 4, 2831-2837.	14.6	6
65	Electronic and magnetic structure of graphene nanoribbons. Semiconductor Science and Technology, 2010, 25, 033003.	2.0	68
66	Origin of the quasiuniversality of the minimal conductivity of graphene. Physical Review B, 2010, 82, .	3.2	13
67	The Kondo effect in ferromagnetic atomic contacts. Nature, 2009, 458, 1150-1153.	27.8	132
68	Giant Magnetoresistance in Ultrasmall Graphene Based Devices. Physical Review Letters, 2009, 102, 136810.	7.8	274
69	Electrodeâ€“Molecule Interface Effects on Molecular Conductance. IEEE Nanotechnology Magazine, 2009, 8, 16-21.	2.0	12
70	Vacancy-induced magnetism in graphene and graphene ribbons. Physical Review B, 2008, 77, .	3.2	390
71	Performance limits of graphene-ribbon field-effect transistors. Physical Review B, 2008, 77, .	3.2	57
72	Mechanical, Electrical, and Magnetic Properties of Ni Nanocontacts. IEEE Nanotechnology Magazine, 2008, 7, 165-168.	2.0	12

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73	Interface Study of Metal Electrode and Semiconducting Carbon Nanotubes: Effects of Electrode Atomic Species. IEEE Nanotechnology Magazine, 2008, 7, 124-127.	2.0	6
74	Simple STM Tip Functionalization for Rapid DNA Sequencing:â€‰ An Ab Initio Green's Function Study. Journal of Physical Chemistry A, 2008, 112, 2069-2073.	2.5	6
75	Metal contacts in carbon nanotube field-effect transistors: Beyond the Schottky barrier paradigm. Physical Review B, 2008, 77, .	3.2	32
76	Anisotropic magnetoresistance in nanocontacts. Physical Review B, 2008, 77, .	3.2	28
77	Exchange-induced charge inhomogeneities in rippled neutral graphene. Physical Review B, 2008, 77, .	3.2	46
78	Localized basis sets for unbound electrons in nanoelectronics. Journal of Chemical Physics, 2008, 128, 074108.	3.0	3
79	Formation of a Metallic Contact: Jump to Contact Revisited. Physical Review Letters, 2007, 98, 206801.	7.8	73
80	Critical fields for vortex expulsion from narrow superconducting strips. Physical Review B, 2007, 75, .	3.2	9
81	Magnetism in Graphene Nanoislands. Physical Review Letters, 2007, 99, 177204.	7.8	696
82	Electronic structure of gated graphene and graphene ribbons. Physical Review B, 2007, 75, .	3.2	93
83	Electron transport properties of the porphyrin molecule located between gold electrodes. Chemical Physics Letters, 2007, 445, 238-242.	2.6	16
84	Electronic structure and transport properties of atomic NiO spinvalves. Journal of Magnetism and Magnetic Materials, 2007, 310, e675-e677.	2.3	2
85	Coherent transport in graphene nanoconstrictions. Physical Review B, 2006, 74, .	3.2	162
86	Modulation of Molecular Conductance Induced by Electrode Atomic Species and Interface Geometry. Journal of Physical Chemistry B, 2006, 110, 7456-7462.	2.6	13
87	Electrode-molecule interface effects on molecular conductance. , 2006, , .		0
88	Mechanical and electrical properties of Ni nanocontacts. , 2006, , .		1
89	Interface study of metal electrode and semiconducting carbon nanotubes: effects of electrode atomic species. , 2006, , .		0
90	Spin filter behaviour of atomic NiO chains in Ni nanocontacts. , 2006, , .		0

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91	Emergence of half-metallicity in suspended NiO chains:Ab initioelectronic structure and quantum transport calculations. Physical Review B, 2006, 74, .	3.2	25
92	Orbital eigenchannel analysis forab initioquantum transport calculations. Physical Review B, 2006, 73, .	3.2	28
93	Molecular Electronics with Gaussian98/03. Computational Chemistry - Reviews of Current Trends, 2005, , 1-46.	0.4	7
94	Transport in magnetically ordered Pt nanocontacts. Physical Review B, 2005, 72, .	3.2	34
95	Magnetic and orbital blocking in Ni nanocontacts. Physical Review B, 2005, 71, .	3.2	63
96	Ballistic resistivity in aluminum nanocontacts. Physical Review B, 2005, 72, .	3.2	25
97	Vortices in a rotating Bose-Einstein condensate under extreme elongation. Physical Review A, 2005, 72, .	2.5	21
98	Coulomb blockade in electron transport through aC60molecule from first principles. Physical Review B, 2005, 72, .	3.2	52
99	Electronic transport and vibrational modes in a small molecular bridge:H2in Pt nanocontacts. Physical Review B, 2004, 69, .	3.2	48
100	Conductance fluctuations in metallic nanocontacts. Physical Review B, 2004, 70, .	3.2	1
101	Solutions of the Ginzburgâ€“Landau functional with a current constraint. Physica C: Superconductivity and Its Applications, 2004, 404, 326-329.	1.2	1
102	Analysis of Scanning Tunneling Spectroscopy Experiments from First Principles: The Test Case of C60 Adsorbed on Au(111). ChemPhysChem, 2003, 4, 388-392.	2.1	31
103	First-Principles Phase-Coherent Transport in Metallic Nanotubes with Realistic Contacts. Physical Review Letters, 2003, 90, 106801.	7.8	159
104	Fractional-quantum-Hall edge electrons and Fermi statistics. Physical Review B, 2003, 67, .	3.2	27
105	Implementing the Keldysh formalism intoab initiomethods for the calculation of quantum transport: Application to metallic nanocontacts. Physical Review B, 2003, 67, .	3.2	76
106	First-principles approach to electrical transport in atomic-scale nanostructures. Physical Review B, 2002, 66, .	3.2	186
107	An ab initio approach to electrical transport in molecular devices. Nanotechnology, 2002, 13, 378-381.	2.6	13
108	Fullerene-based molecular nanobridges:â€ƒA first-principles study. Physical Review B, 2001, 64, .	3.2	138

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109	Electronic transport through C60molecules. Nanotechnology, 2001, 12, 160-163.	2.6	31
110	Effective lowest Landau level treatment of demagnetization in superconducting mesoscopic disks. Physical Review B, 2001, 64, .	3.2	6
111	Paramagnetic response and vortex escape and entrance barriers in superconducting mesoscopic disks. Physica C: Superconductivity and Its Applications, 2000, 332, 263-265.	1.2	2
112	Skyrme liquid versus Skyrme solid. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 6, 79-82.	2.7	0
113	Quasiparticle properties of quantum Hall ferromagnets. Physical Review B, 2000, 62, 2640-2658.	3.2	9
114	Metastability and Paramagnetism in Superconducting Mesoscopic Disks. Physical Review Letters, 2000, 84, 1796-1799.	7.8	111
115	Fine Structure in Magnetization of Individual Fluxoid States. Physical Review Letters, 2000, 85, 1528-1531.	7.8	84
116	Skyrme crystal versus Skyrme liquid. Physical Review B, 1999, 60, 15570-15573.	3.2	13
117	Paramagnetic Meissner Effect in Mesoscopic Superconductors. , 1999, , 273-280.		1
118	Vortex matter in mesoscopic superconductors. Physica B: Condensed Matter, 1998, 256-258, 610-617.	2.7	23
119	Vortex lattices in strong type-II superconducting two-dimensional strips. Physical Review B, 1998, 57, 10873-10876.	3.2	25
120	Bulk charge distributions on integer and fractional quantum Hall plateaus. Physical Review B, 1998, 57, 7119-7123.	3.2	4
121	Magnons and Skyrmions in fractional Hall ferromagnets. Physical Review B, 1998, 58, R10171-R10174.	3.2	29
122	Vortex matter in superconducting mesoscopic disks: Structure, magnetization, and phase transitions. Physical Review B, 1998, 58, R5948-R5951.	3.2	111
123	Fine structure in the off-resonance conductance of small Coulomb-blockade systems. Physical Review B, 1997, 55, 15735-15739.	3.2	13
124	Signature of Quantum Hall Effect Skyrmions in Tunneling: A Theoretical Study. Physical Review Letters, 1997, 79, 471-474.	7.8	15
125	Critical comparison of classical field theory and microscopic wave functions for skyrmions in quantum Hall ferromagnets. Physical Review B, 1997, 56, 6795-6804.	3.2	53
126	Charge excitations of quantum dots in magnetic fields. Solid-State Electronics, 1996, 40, 21-24.	1.4	1

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127	Long-lived charged multiple-exciton complexes in strong magnetic fields. Physical Review B, 1996, 54, R2296-R2299.	3.2	112
128	Numerical Tests of the Chiral Luttinger Liquid Theory for Fractional Hall Edges. Physical Review Letters, 1996, 76, 118-121.	7.8	43
129	Correlation effects in quantum dots in magnetic fields. Physica B: Condensed Matter, 1995, 212, 224-230.	2.7	4
130	Electronic structure of artificial atoms in intense AC terahertz and strong magnetic fields. Solid State Communications, 1995, 93, 909-914.	1.9	12
131	Low-Lying Excitations of Quantum Hall Droplets. Physical Review Letters, 1995, 74, 5120-5123.	7.8	45
132	Spin effects in a confined two-dimensional electron gas: Enhancement of thegfactor, spin-inversion states, and their far-infrared absorption. Physical Review B, 1995, 52, 11266-11272.	3.2	7
133	Correlated few-electron states in vertical double-quantum-dot systems. Physical Review B, 1995, 51, 1769-1777.	3.2	121
134	Self-consistent Hartree description ofNelectrons in a quantum dot with a magnetic field. Physical Review B, 1994, 49, 5718-5721.	3.2	13
135	Capacitance spectroscopy in quantum dots: Addition spectra and decrease of tunneling rates. Physical Review B, 1994, 50, 5760-5763.	3.2	147
136	Optical emission and Raman scattering in modulation-doped gaAs-AlGaAs quantum wires and dots. Superlattices and Microstructures, 1994, 15, 23.	3.1	16
137	The interplay between magnetic field and electron-electron interaction on transport through quantum dots. Superlattices and Microstructures, 1994, 15, 91.	3.1	5
138	Ground state properties of interacting electrons in semiconductor quantum dots: Exact and unrestricted hartree-fock results. Solid-State Electronics, 1994, 37, 1179-1182.	1.4	3
139	Correlation effects on transport through few-electrons systems. Surface Science, 1994, 305, 541-546.	1.9	4
140	Many-body effects in quantum dots under magnetic fields. Physica Scripta, 1994, T55, 20-24.	2.5	2
141	Coulomb blockade in resonant magnetotunneling through rectangular quantum dots. Physica B: Condensed Matter, 1993, 189, 27-33.	2.7	2
142	Magnetotunnelling through Quantum Boxes in a Strong-Correlation Regime. Europhysics Letters, 1993, 23, 495-501.	2.0	30
143	Phase separation of edge states in the integer quantum Hall regime. Physical Review B, 1993, 47, 13884-13886.	3.2	32
144	Mode-matching technique for transmission calculations in electron waveguides at high magnetic fields. Physical Review B, 1993, 48, 5386-5394.	3.2	27

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145	Electron-Phonon Scattering in Semiconductor Nanostructures under High Magnetic Fields. , 1993, , 253-259.		0
146	Magnetic-field effects on the transport coefficients of a quantum point contact. Physical Review B, 1992, 45, 13725-13728.	3.2	7
147	Effects of geometry on edge states in magnetic fields: Adiabatic and nonadiabatic behavior. Physical Review B, 1992, 45, 9059-9064.	3.2	17
148	Scattering and Coulomb blockade in magnetotunneling across singly and multiply connected barriers in quasi-two-dimensional systems. Surface Science, 1992, 263, 424-427.	1.9	0
149	Edge states in quantum wells with magnetic fields. Physica Scripta, 1991, T35, 121-124.	2.5	3
150	Magnetotunneling in a doubly connected system. Physica B: Condensed Matter, 1991, 175, 315-319.	2.7	0
151	Quenching of scattering in mesoscopic systems in the quantum Hall regime. Physical Review B, 1991, 44, 8157-8164.	3.2	13